

Question Sheet

1. Differentiate $f(x) = 4x^{\frac{1}{2}} + 4x^{-\frac{1}{3}}$.
2. Differentiate $y = 5x^3 + x^{\frac{1}{2}} - 3$.
3. Differentiate $y = 2x^{-\frac{1}{3}} - x^{-3}$.
4. Differentiate $y = x^{\frac{2}{3}} - 5x^{\frac{1}{3}} + 4$.
5. Differentiate $y = 3x^{\frac{1}{3}} - 2x^{\frac{2}{3}}$.
6. Differentiate $y = 2x^3 - 2x^{-\frac{2}{3}}$.
7. Differentiate $f(x) = 3x^{-2} + 5x^{-1} - 4$.
8. Differentiate $y = 6x^{-2} - 2x^{\frac{1}{3}}$.
9. Differentiate $y = x^{\frac{1}{2}} + 3x^{\frac{3}{2}}$.
10. Differentiate $f(x) = x + 5x^{\frac{1}{2}}$.
11. Differentiate $f(x) = 4x^{\frac{3}{2}} - 2x$.
12. Differentiate $f(x) = 2x^{-3} - 5x^3 + 4$.
13. Differentiate $y = 2x^{\frac{2}{3}} - 2x^2$.
14. Differentiate $y = 6x + 2x^{\frac{1}{2}} - 5$.
15. Differentiate $y = 4x^{\frac{2}{3}} - 4x^{\frac{1}{2}}$.